

sequence1ist-21408.ST25
SEQUENCE LISTING

<110> Roche Vitamins AG

<120> Enone reductase gene

<130> NDR5231

<160> 30

<170> PatentIn version 3.1

<210> 1

<211> 1212

<212> DNA

<213> Candida kefyr

<220>

<221> CDS

<222> (1)..(1212)

<223>

<400> 1

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ttc	aag	cca	atc	aag	atc	ggt	aac	aat	gag	cta	aaa	cac	aga	gta	gtc	96
Phe	Lys	Pro	Ile	Lys	Ile	Gly	Asn	Asn	Glu	Leu	Lys	His	Arg	Val	Val	
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atg	cca	gca	ttg	act	aga	atg	aga	gcc	att	gca	cca	gga	aac	atc	cca	144
Met	Pro	Ala	Leu	Thr	Arg	Met	Arg	Ala	Ile	Ala	Pro	Gly	Asn	Ile	Pro	
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aac	act	gaa	tgg	gcc	gag	gaa	tac	tac	aga	caa	cgt	tct	caa	tac	cct	192
Asn	Thr	Glu	Trp	Ala	Glu	Glu	Tyr	Tyr	Arg	Gln	Arg	Ser	Gln	Tyr	Pro	
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Gly	Thr	Leu	Ile	Ile	Thr	Glu	Gly	Thr	Phe	Pro	Ser	Ala	Gln	Ser	Gly	
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ggt	tac	cca	aat	gtg	cca	ggt	atc	tgg	tcc	aaa	gag	caa	ttg	gct	gaa	288
Gly	Tyr	Pro	Asn	Val	Pro	Gly	Ile	Trp	Ser	Lys	Glu	Gln	Leu	Ala	Glu	
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tgg Trp	aaa Lys	aag Lys	atc Ile 100	ttc Phe	aat Asn	gca Ala	atc Ile 105	cat His	gag Glu	aac Asn	aaa Lys	tcg Ser	ttc Phe 110	gtg Val	tgg Trp	336
gtg Val	caa Gln	ttg Leu 115	tgg Trp	gtt Val	cta Leu	ggg Gly	aga Arg 120	caa Gln	gca Ala	tgg Trp	cca Pro	gaa Glu 125	gtg Val	ttg Leu	aag Lys	384
aag Lys	gaa Glu 130	ggg Gly	ttg Leu	cgt Arg	tac Tyr	gat Asp 135	agt Ser	gct Ala	acc Thr	gat Asp	gac Asp 140	ttg Leu	tac Tyr	atg Met	ggg Gly	432
gaa Glu 145	gaa Glu	gaa Glu	aaa Lys	gag Glu 150	cgt Arg	gcc Ala	tta Leu	aag Lys	gct Ala	aac Asn 155	aac Asn	cca Pro	cag Gln	cac His	ggg Gly 160	480
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gcc Ala	aac Asn	ggg Gly 195	tac Tyr	ttg Leu	ttg Leu	aac Asn	cag Gln 200	ttt Phe	ttg Leu	gac Asp	cct Pro	att Ile 205	tct Ser	aac Asn	aac Asn	624
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ctc Leu	aga Arg	gtt Val	ggg Gly	aac Asn 325	tat Tyr	gct Ala	ttg Leu	gac Asp	cca Pro 330	gat Asp	caa Gln	gcc Ala	act Thr	ctc Leu 335	gac Asp	1008
tct Ser	aag Lys	aag Lys	cct Pro 340	aac Asn	act Thr	ttg Leu	atc Ile	ggg Gly 345	tac Tyr	ggg Gly	aga Arg	tcc Ser	ttc Phe 350	atc Ile	gcc Ala	1056
aac Asn	cca Pro	gac Asp 355	ttg Leu	gtg Val	tac Tyr	cgt Arg	ttg Leu 360	gaa Glu	aag Lys	ggg Gly	ttg Leu	cca Pro 365	ttg Leu	aac Asn	aag Lys	1104

sequencelist-21408.ST25

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 Tyr Asp Arg Asn Thr Phe Tyr Thr Phe Thr Lys Glu Gly Tyr Thr Asp
 370 375 380

tac cca agc tac gaa gaa tcc gtc gca aag ggt tac aag aaa gag gaa 1200
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<213> Candida kefyr

<400> 2

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Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Lys His Arg Val Val
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Met Pro Ala Leu Thr Arg Met Arg Ala Ile Ala Pro Gly Asn Ile Pro
 35 40 45

Asn Thr Glu Trp Ala Glu Glu Tyr Tyr Arg Gln Arg Ser Gln Tyr Pro
 50 55 60

Gly Thr Leu Ile Ile Thr Glu Gly Thr Phe Pro Ser Ala Gln Ser Gly
 65 70 75 80

Gly Tyr Pro Asn Val Pro Gly Ile Trp Ser Lys Glu Gln Leu Ala Glu
 85 90 95

Trp Lys Lys Ile Phe Asn Ala Ile His Glu Asn Lys Ser Phe Val Trp
 100 105 110

Val Gln Leu Trp Val Leu Gly Arg Gln Ala Trp Pro Glu Val Leu Lys
 115 120 125

Lys Glu Gly Leu Arg Tyr Asp Ser Ala Thr Asp Asp Leu Tyr Met Gly
 130 135 140

Glu Glu Glu Lys Glu Arg Ala Leu Lys Ala Asn Asn Pro Gln His Gly
 145 150 155 160

Ile Thr Lys Glu Glu Ile Lys Gln Tyr Ile Lys Glu Tyr Val Asp Ala
 165 170 175

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 180 185 190

Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro Ile Ser Asn Asn
 195 200 205

Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe Thr
 210 215 220

Leu Glu Val Val Asp Ala Val Val Asp Ala Val Gly Ala Glu Arg Thr
 225 230 235 240

Ser Ile Arg Phe Ser Pro Tyr Gly Thr Phe Gly Thr Met Ser Gly Gly
 245 250 255

Glu Asn Pro Gly Ile Val Ala Gln Tyr Ala Tyr Val Ile Gly Glu Leu
 260 265 270

Glu Lys Arg Ala Arg Ala Gly Lys Arg Leu Ala Phe Ile Asp Leu Val
 275 280 285

Glu Pro Arg Val Thr Asp Pro Phe Leu Pro Glu Phe Glu Lys Trp Phe
 290 295 300

Lys Glu Gly Thr Asn Glu Phe Ile Tyr Ser Ile Trp Lys Gly Pro Val
 305 310 315 320

Leu Arg Val Gly Asn Tyr Ala Leu Asp Pro Asp Gln Ala Thr Leu Asp
 325 330 335

Ser Lys Lys Pro Asn Thr Leu Ile Gly Tyr Gly Arg Ser Phe Ile Ala
 340 345 350

Asn Pro Asp Leu Val Tyr Arg Leu Glu Lys Gly Leu Pro Leu Asn Lys
 355 360 365

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Lys Lys Tyr

<210> 3

<211> 12

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sequencelist-21408.ST25

<213> Candida kefyr

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<211> 50

<212> PRT

<213> Candida kefyr

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 35 40 45

Val Gln
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<210> 5

<211> 8

<212> PRT

<213> Candida kefyr

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Glu Gln Leu Ala Glu Trp Lys Lys
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<210> 6

<211> 9

<212> PRT

<213> Candida kefyr

<400> 6

Ile Phe Asn Ala Ile His Glu Asn Lys
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<210> 7

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<213> Candida kefyr

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<222> (15)..(15)

<223> Xaa is unknown

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Glu Val

<210> 8

<211> 19

<212> PRT

<213> Candida kefyr

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 1 5 10 15

Glu Glu Lys

<210> 9

<211> 10

<212> PRT

sequence1ist-21408.ST25

<213> Candida kefyr

<400> 9

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1 5 10

<210> 10

<211> 7

<212> PRT

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<400> 10

Glu Tyr Val Asp Ala Ala Lys
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<210> 11

<211> 50

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<213> Candida kefyr

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<222> (43)..(43)

<223> Xaa is unknown

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<222> (47)..(48)

<223> Xaa is unknown

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<222> (45)..(45)

<223> Xaa is unknown

<400> 11

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Glu Tyr Gly Gly Ser Ile Ile Asn Arg Ala Xaa Phe Xaa Leu Xaa Xaa
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Val Asp
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<211> 22

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<213> Candida kefyr

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Leu Pro Glu Phe Glu Lys
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<210> 14

<211> 21

<212> PRT

<213> Candida kefyr

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sequencelist-21408.ST25

Thr Leu Asp Ser Lys
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<212> PRT

<213> Candida kefyr

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1 5 10 15

Asp Leu Val Tyr Arg Leu Glu Lys
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<210> 16

<211> 6

<212> PRT

<213> Candida kefyr

<400> 16

Gly Leu Pro Leu Asn Lys
1 5

<210> 17

<211> 11

<212> PRT

<213> Candida kefyr

<400> 17

Tyr Asp Arg Asn Thr Phe Tyr Thr Phe Thr Lys
1 5 10

<210> 18

<211> 15

<212> PRT

<213> Candida kefyr

<400> 18

sequence1ist-21408.ST25

Glu Gly Tyr Thr Asp Tyr Pro Ser Tyr Glu Glu Ser Val Ala Lys
 1 5 10 15

<210> 19

<211> 9

<212> PRT

<213> Artificial

<400> 19

Gly Asp Thr Asn Ile Phe Lys Pro Ile
 1 5

<210> 20

<211> 9

<212> PRT

<213> Artificial

<400> 20

Gly Glu Lys Thr Phe Thr Tyr Phe Thr
 1 5

<210> 21

<211> 1058

<212> DNA

<213> Candida kefyr

<220>

<221> CDS

<222> (1)..(1056)

<223>

<400> 21

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 1 5 10 15

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 Gly Asn Ile Pro Asn Thr Glu Trp Ala Glu Glu Tyr Tyr Arg Gln Arg
 20 25 30

tct caa tac cct ggt acc ctt att atc acg gaa ggt act ttc cct tct 144
 Ser Gln Tyr Pro Gly Thr Leu Ile Ile Thr Glu Gly Thr Phe Pro Ser
 35 40 45

sequencelist-21408.ST25

gcg Ala	caa Gln	tca Ser	ggt Gly	ggt Gly	tac Tyr	cca Pro	aat Asn	gtg Val	cca Pro	ggt Gly	atc Ile	tgg Trp	tcc Ser	aaa Lys	gag Glu	192
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				85					90					95		
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			100					105					110			
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			260					265					270			
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		275					280					285				
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	290					295					300					
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 325 330 335

cca ttg aac aag tat gat aga aac acc ttc tac acc ttc acc aaa gag 1056
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<210> 22

<211> 352

<212> PRT

<213> Candida kefyr

<400> 22

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Ser Gln Tyr Pro Gly Thr Leu Ile Ile Thr Glu Gly Thr Phe Pro Ser
 35 40 45

Ala Gln Ser Gly Gly Tyr Pro Asn Val Pro Gly Ile Trp Ser Lys Glu
 50 55 60

Gln Leu Ala Glu Trp Lys Lys Ile Phe Asn Ala Ile His Glu Asn Lys
 65 70 75 80

Ser Phe Val Trp Val Gln Leu Trp Val Leu Gly Arg Gln Ala Trp Pro
 85 90 95

Glu Val Leu Lys Lys Glu Gly Leu Arg Tyr Asp Ser Ala Thr Asp Asp
 100 105 110

Leu Tyr Met Gly Glu Glu Glu Lys Glu Arg Ala Leu Lys Ala Asn Asn
 115 120 125

Pro Gln His Gly Ile Thr Lys Glu Glu Ile Lys Gln Tyr Ile Lys Glu
 130 135 140

Tyr Val Asp Ala Ala Lys Lys Ala Ile Asp Ala Gly Ala Asp Gly Val
 145 150 155 160

Gln Ile His Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro
 165 170 175

sequencelist-21408.ST25

Ile Ser Asn Asn Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg
 180 185 190

Ala Arg Phe Thr Leu Glu Val Val Asp Ala Val Val Asp Ala Val Gly
 195 200 205

Ala Glu Arg Thr Ser Ile Arg Phe Ser Pro Tyr Gly Thr Phe Gly Thr
 210 215 220

Met Ser Gly Gly Glu Asn Pro Gly Ile Val Ala Gln Tyr Ala Tyr Val
 225 230 235 240

Ile Gly Glu Leu Glu Lys Arg Ala Arg Ala Gly Lys Arg Leu Ala Phe
 245 250 255

Ile Asp Leu Val Glu Pro Arg Val Thr Asp Pro Phe Leu Pro Glu Phe
 260 265 270

Glu Lys Trp Phe Lys Glu Gly Thr Asn Glu Phe Ile Tyr Ser Ile Trp
 275 280 285

Lys Gly Pro Val Leu Arg Val Gly Asn Tyr Ala Leu Asp Pro Asp Gln
 290 295 300

Ala Thr Ile Asp Ser Lys Lys Pro Asn Thr Leu Ile Gly Tyr Gly Arg
 305 310 315 320

Ser Phe Ile Ala Asn Pro Asp Leu Val Tyr Arg Leu Glu Lys Gly Leu
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Pro Leu Asn Lys Tyr Asp Arg Asn Thr Phe Tyr Thr Phe Thr Lys Glu
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<210> 23

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<212> DNA

<213> Artificial

<400> 23

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<210> 24

<211> 26

<212> DNA

<213> Artificial

sequencelist-21408.ST25

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sequence1ist-21408.ST25

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<213> Artificial

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<212> DNA

<213> Candida kefyr

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